

## ABSTRACT

A data network including at least one crossbar, wherein each crossbar comprises N ports and a plurality N of devices each associated with and connected to one port of one of <sup>the</sup> said crossbars. Each one port of one crossbar includes an input buffer, a plurality N-1 of port output buffers, a plurality N-1 of fullness sensors, <sup>devices</sup> shutoff means. The input buffer receives messages from the device connected to its port and sends <sup>the</sup> said messages to the other ports of <sup>the</sup> said one crossbar. Each port output buffers corresponds to one of <sup>the</sup> said other ports, wherein each port output buffer receives <sup>the</sup> said messages only from <sup>the</sup> said input buffer of its associated other port. Each fullness sensor is associated with one port output buffer and measures the fullness state of its associated port output buffer.

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